CALL FOR THE ADMISSION TO THE MD PROGRAM IN MEDICINE AND SURGERY
ACADEMIC YEAR 2019/2020

This document is the translation into English of the competition call DR 20th June 2019, n.168 for the MD program. The document written in English has no legal value. The Italian version is the official document regulating this call. In case of conflicting issues between the English and the Italian version, the Italian version succeeds. Admission to the MD Program in Medicine and Surgery is regulated by a selective procedure on the basis of the following available places:

Places (n=40) are available for European citizens and NON-EU citizens regularly residing in Italy ex article 26 of Law n.189/2002.

1. REQUIREMENTS FOR APPLYING TO THE ADMISSION TEST

Italian candidates holding a Secondary School Diploma obtained abroad, European and NON-European candidates regularly residing in Italy as well as candidates holding either an Italian or a European citizenship, are entitled to apply to this call with the same modalities as Italian Citizens according to the Ministry (MIUR) guidelines (www.studiare-in-italia.it/studentistranieri).

Candidates' Secondary School qualification is deemed as valid if obtained after at least 12 years of education, accompanied by the Declaration of Value issued by the Italian diplomatic authorities in their country of residence.

If the local school system is structured in 10 or 11 years of schooling, the qualification is valid when integrated with one or two years of university and the candidate must provide proof of the successful completion of the required exams for the attended academic years.

Candidates must possess an English language Certification of at least B2 level according to the CEFR (*Common European Framework of Reference of Languages),* obtained within the application deadline. Accepted certifications are listed in Annex B and must be attached to the application for the admission test (see paragraph 2).

2. REGISTRATION TO THE ADMISSION TEST

In order to register for the admission test, candidates must follow an online procedure through the University Website www.unicampus.it/ammissioni. To register to the admission test candidates are required to:

1. fill in the online application form, available on the website starting **from July 2nd 2019 to July 26th 2019 at 1.00 PM (Central European Time – CET)**;

2. pay the application fee of **€ 150,00 by July 26th 2019 at 1.00 PM CET**;

Under no circumstances the application fee will be reimbursed.

For registration, the following information must be included:

- Personal data;
- Details of your studies and language certification (to be attached);
- Application fee of **€ 150,00**;

Candidates will receive a confirmation email and can modify data entry until July 26th 2019 (1.00 PM CET).

Candidates are responsible for the insertion of the requested information. Candidates providing wrong or false information or omission of them will be automatically disqualified from the selection procedure and from the

final ranking and will lose the right to enroll or their enrolment will become invalid. The University reserves the right to verify all data and information provided by candidates.

For further information about the admission procedure, candidates should contact orientamento@unicampus.it- phone: +39 06.22.541.9056/8124/9255/9047/8715/9044.

Candidates with a disability, according to the Italian Law n. 104/92, and candidates with learning disabilities, according to the Italian Law n. 170/2010, in order to be eligible for disability support and adjustments are required to send a formal request to dsa@unicampus.it attaching medical evidence dated within the last three years. The written medical evidence should clearly specify the type of diagnosis in order for the university staff to provide all necessary support to enable those candidates to attempt the admission test. The University reserves the right to verify declarations and certifications of candidates. Only medical evidence written in Italian or English will be accepted and evaluated.

3. ADMISSION TEST

The Admission Test will be held on **August 30th 2019 at 10.00 AM.** The candidates must be present at 08:30. The location where the admission test will take place is going to be published on the University website: www.unicampus.it/ammissioni by July 26th 2019.

The written test will be paper based and carried out in English with a duration of 2 hours and 30 minutes. It includes **100 multiple-choice questions** as follows: **Logical reasoning (50 questions), Biology (15 questions), Chemistry (15 questions), Physics and Mathematics (15 questions), General Knowledge (5 questions).** Syllabuses for each discipline are listed in Annex A.

During the test, candidates are not allowed to use any electronic device.

Points are assigned as follows:
- 1 point for each correct answer;
- -0.2 point for each incorrect answer;
- 0 points for each not given answer;

The highest achievable score in the written test is 100 points.

4. ADMISSION TO THE MD PROGRAM

Candidates will be accepted to the MD Program in Medicine and Surgery on the basis of the total achieved score which will determine the position in the final ranking.

If two candidates achieve the same score, the one who obtained a higher score in Logical reasoning section prevails; In case of further tie, the candidate who obtained a higher score in Biology, Chemistry, Mathematics and Physics will prevail. In case of a further tie, the place will be assigned to the younger candidate. In order to be eligible, candidates must score at least 20 points.

Candidates will be admitted to the MD Program on the basis of the final ranking until all available positions have been assigned (considering the number of places assigned by the Decree of the Ministry of Education, University and Research). The final ranking in alphabetic order, will be issued by Rector Decree and will be published on the University website www.unicampus.it/ammissioni by **September 9th 2019.**
The rankings of eligible and not eligible candidates will be issued by Rector Decree and will be published on the University website www.unicampus.it/ammissioni by **September 9th 2019**.

From **September 10th 2019,** candidates can view the final score by accessing their personal page on the portal with the credentials used for the registration. They can also view the test results in each discipline and in case they have been assigned any additional learning obligations (see paragraph 5).

5. ENROLMENT

At the end of the admission test:

From September 9ᵗʰ to September 13ᵗʰ 2019 (within 1.00 PM CET) accepted candidates must secure their place by:

a) Deliver (send either via fax on this number 06225411939 or via certified mail segreteria.studenti@postasicura.unicampus.it) to the Students office the filled and signed enrolment form, available on the website http://www.unicampus.it/eng/medicine-and-surgery/admissions ;

b) Attach to the enrolment form, the payment receipt of the first instalment (which includes also the regional tax fee) determined by Rector Decree and available on the University website: www.unicampus.it/ammissioni;

c) Attach the substitute declaration of achievement of the Secondary School Diploma indicating the final grade, year and the issuing institute, in case of foreign diploma attach also the Declaration of Value (Dichiarazione di Valore);

d) A formal letter of withdrawal is required in case of enrolment to an another University.

Candidates who do not complete the enrolment procedures within the deadlines (September 13ᵗʰ 2019 at 1.00 PM, CET) will lose the assigned place and will not be allowed to enroll.

From September 16ᵗʰ 2019 according to the ranking order, **available places will be assigned to eligible candidates**. Eligible candidates will be informed of the availability of places via secure mail from the Student Office (segreteria.studenti@postasicura.unicampus.it). **Note: it is the candidate's responsibility to check the communication has been correctly received to the email address used in the registration procedure**.

Eligible candidates, within 24 hours of the communication from the Student Office, must secure their place by sending to admission@unicampus.it the documents above listed at **points a-d.**

Once enrolled at Campus Bio-Medico University of Rome, students whose test results in the different disciplines cross specific thresholds (≥7 incorrect answers in Biology, ≥7 incorrect answers in Chemistry and ≥7 incorrect answers in Mathematics and Physics), are required to attend a course within the first academic year in order to meet the standard level requirements prior to the specific exam.

Annex A
Syllabus regarding the content of the Admission Test

For admission to the course a general knowledge in the fields of literature, history, philosophy, social and institutional studies is required, as well as the ability to analyze written texts, logical and mathematical reasoning skills.

The knowledge and the skills required are, however, those promoted by educational institutions that organize educational and teaching activities consistent with the Ministerial Programs, especially in view of the State Examinations and also refer to the scientific disciplines of Biology, Chemistry, Physics, and Mathematics.

General knowledge and logical reasoning

Assessment of the ability to properly use the language used in the courses and of logical reasoning in a consistent manner with the premises as set out in symbolic or verbal form through multiple-choice questions formulated with short sentences, discarding the incorrect, arbitrary, or less likely conclusions.

The questions will be based on scientific essays or narrative by classical or contemporary authors, or on texts appearing in newspapers or in general or specialized magazines. Questions will also focus on abstract cases or problems, whose solution requires the adoption of different forms of logical reasoning. Questions related to general knowledge, covered during the study curriculum, complete this area of evaluation.

Questions related to history can refer also to the Twentieth Century history and current world events.

Questions related to social and institutional studies, which are consistent with the national guidelines and the activities carried out for "Citizenship and Constitution", will be also related to the Constitution, communication and mass communication tools, economy and politics organization, state and government forms.

Biology
- The chemistry of living organisms.
- The biological importance of weak interactions.
- The organic molecules found in living organisms and their functions.
- The role of enzymes.
- The cell as the basis of life.
- Cell theory. Cell size. The prokaryotic and eukaryotic cell in animals and plants. Viruses.
- The cell membrane: structure and functions - transport through the membrane.
- Cellular structures and their specific functions.
- Cell cycle and cell division: mitosis and meiosis - chromosomes and chromosome maps.
- Bioenergetics.
- The energy assessment of cells: ATP.
- Redox reactions in living organisms.
- The energetic processes: photosynthesis, glycolysis, aerobic respiration and fermentation.
- Reproduction and heredity.
- Life cycles. Sexual and asexual reproduction.
- Mendelian Genetics. Fundamental laws and applications.
- Classical genetics: chromosome theory of heredity; patterns of heredity.
- Molecular Genetics: structure and replication of DNA, the genetic code, protein synthesis. The DNA of prokaryotes. The structure of the eukaryotic chromosome. Genes and regulation of gene expression.
- Human genetics: transmission of mono- and multifactorial characters; hereditary diseases linked to the X chromosome and autosomal
- Biotechnology: Recombinant DNA technology and its applications.
- Heredity and environment.
- Mutations. Natural and artificial selection. Evolutionary theories. The Genetic basis of evolution.
- Anatomy and physiology of animals and man
- Animal tissues

- Anatomy and physiology of systems and equipment in humans and their interactions.
- Homeostasis.

Chemistry
- The constitution of matter: states of matter; heterogeneous systems and systems homogeneous; compounds and elements.
- Ideal Gas Laws.
- The structure of the atom: elementary particles; atomic number and mass number, isotopes, electronic structure of atoms of different elements.
- The periodic system of elements: groups and periods; transition elements; periodic properties of the elements: atomic radius, ionization potential, electron affinity; metallic character. Relations between electronic structures, position in the periodic system of elements and properties.
- Chemical bonding: ionic bonding, covalent bonding, and metallic bonding. Energy binding. Polarity of bonds. Electronegativity.
- Fundamentals of inorganic chemistry: nomenclature and main properties of inorganic compounds: oxides, hydroxides, acids, salts.
- The chemical reactions and stoichiometry: molecular and atomic mass, Avogadro's number, mole concept and its application, stoichiometry elementary balance of simple reactions, the different types of chemical reaction.
- Solutions: solvent properties of water; solubility; The main ways of expressing the concentration of solutions.
- Equilibria in aqueous solution.
- Elements of chemical kinetics and catalysis.
- Oxidation and reduction: oxidation number, the concept of oxidant and reductant.
- Balance of simple reactions.
- Acids and bases: concepts of acid and base; acidity, neutrality or alkalinity of aqueous solutions; the pH. Hydrolysis. Buffer solutions.
- Fundamentals of organic chemistry: bonds between carbon atoms; formulas and rough texture, concept of isomerism. Aliphatic, alicyclic and aromatic hydrocarbons. Functional groups: alcohols, ethers, amines, aldehydes, ketones, carboxylic acids, esters, amides. Elements of nomenclature.

Physics
- Measures: direct and indirect measures, fundamental and derived quantities, physical dimensions of quantities, knowledge of the metric system and the CGS System of Units, Technician (or Practical) (ST) and International (SI) units of measurement (names and relations between fundamental and derived units), and multiples (names and values).
- Kinematics: kinematic quantities, various motions with particular regard to uniform and uniformly accelerated motion; uniform circular motion; harmonic motion (for all motions: definition and relationship between the kinematic quantities related).
- Dynamic: vectors and vector operations. Forces, motion of forces around a point. Vector composition of forces. Definitions of mass and weight. Acceleration of gravity. Density and specific gravity. Law of universal gravitation, 1st, 2nd, and 3rd laws of motion. Work, kinetic energy, potential energy. Principle of conservation of energy. Impulse and momentum. Principle of conservation of momentum.
- Fluid mechanics: pressure, and its unit of measure (not only in the SI system). Archimedes' principle, Pascal's and Stevin's laws.
- Thermology and thermodynamics: thermometry and calorimetry. Specific heat, thermal capacity. Mechanisms of heat propagation. Changes of state and latent heats. Ideal Gas Laws. First and second law of thermodynamics.
- Electrostatics and electrodynamics: Coulomb's law. Electric field and potential. Dielectric constant. Capacitors. Capacitors in series and in parallel capacitors. Current. Ohm's law. Electrical resistance and resistivity, electrical resistors in series and in parallel. Work, Power, Joule effect. Generators.

Electromagnetic induction and alternating currents. Effects of electric currents (thermal, chemical, and magnetic).

Mathematics

- Sets of numbers and algebra: natural numbers, integers, rational and real numbers. Sorting and comparison; order of magnitude and scientific notation. Operations and their properties. Proportions and percentages. Powers with integer exponents, rational and their properties. Radicals and their properties. Logarithms (base 10 and base e) and their properties. Elements of combinatorics. Algebraic expressions, polynomials. Major products, nth power of a binomial, factoring polynomials. Algebraic fractions. Algebraic equations and inequalities of the first and second grade. Systems of equations.
- Functions: fundamental notions about the functions and their graphical representations (domain, codomain, sign, maxima and minima, and monotonicity, etc.). Elementary functions: algebraic integer and fractional, exponential, logarithmic, trigonometric. Composite functions and inverse functions. Trigonometric equations and inequalities.
- Geometry: Polygons and their properties. Circumference and circle. Measurements of lengths, areas, and volumes. Isometries, similarities, and equivalences in the plan. Loci. Measure of angles in degrees and radians. Sine, cosine, tangent of an angle and their significant values. Trigonometric formulas. Solving triangles. Cartesian reference system in the plane. Distance between two points and the midpoint of a segment. Equation of the line. Terms of parallelism and perpendicularity.
- Distance of a point from a line. Equation of the circle, the parabola, hyperbola, of the ellipse and their representation in the Cartesian plane. Pythagorean Theorem. Euclid Theorem (first and second).
- Probability and Statistics: Frequency distributions depending on the type of character and the main graphical representations. Definition of random experiment and event. Probability and frequency.

Certifier	Level	English certifications for the 4 skills
Cambridge English Language Assessment	C2	Cambridge English: Proficiency (CPE)
	C1	Cambridge English: Advanced (CAE)
		Cambridge English: Business Higher (BEC Higher)
	B2	Cambridge English: First (FCE) Cambridge English
		Business Vantage (BEC Vantage)
City and Guilds (Pitman)	C2	Level 3 Certificate in International ESOL Diploma Mastery C2
	C1	Level 2 Certificate in International ESOL Diploma Expert C1
	B2	Level 1 Certificate in International ESOL Diploma Communicator B2
Edexcel / Pearson Ltd	C2	PTE General Level 5 Proficient
		PTE Academic Score ≥85
	C1	PTE General Level 4 Advanced
		PTE Academic Score 76-84
	B2	PTE General Level 3 Upper Intermediate
		PTE Academic Score 59-75
EDI (LCCIEB)	C1	JETSET Level 6 English for Business Level 4
	B2	JETSET Level 5 English for Business Level 3 English for Commerce Level 3
IELTS	C2	IELTS band 8.5 - 9.0
	C1	IELTS band 7.0 - 8.0
	B2	IELTS band 5.5 - 6.5
TCL Trinity College London	C2	Integrated Skills in English (ISE) IV
	C1	Integrated Skills in English (ISE) III
	B2	Integrated Skills in English (ISE) II
TOEFL ETS	C1	TOEFL score 110-120
	B2	TOEFL score 87-109